WILMINGTON onTAP

City of Wilmington Public Utilities Department

SUMMER 2008
Volume 5 Number 3

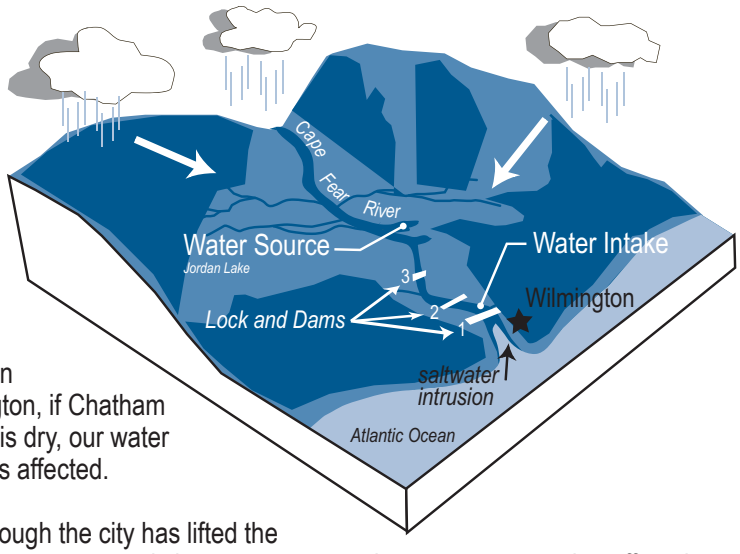
Inside this issue

Wilmington's Drought:

Our worst drought since 1931

Wilmington's worst drought since 1931 is not just affecting us, but the entire Cape Fear region. Wilmington was over 20" below normal in 2007 and, despite any recent rainfalls, precipitation so far in 2008 is also below normal. According to Governor Mike Easley, the state of North Carolina is suffering its worst drought in history. The Governor is encouraging all North Carolina residents to save water.

There is a common misconception that as long as there is water in the Cape Fear River, there is plenty of water available to use. While the City does get its water from the river, Wilmington's raw water intake is located 23 miles upstream in Bladen County. The reason it's located that far inland is because of saltwater intrusion from the Atlantic Ocean. The actual source of our water is located at Jordan Lake in Chatham County, 130 miles upstream.



Even if it rains in Wilmington, if Chatham County is dry, our water supply is affected.

Even though the city has lifted the mandatory water restrictions, we must continue our conservation efforts in order to ensure there will be an adequate water supply. It is important that all residents do their part to help conserve water. Summer is the time when most water is used, and in times of low rain and high usage, our water supply can run short.

For more information:

Visit: wilmingtonnc.gov
Call: 910.341.0114, Water Conservation Hotline
Email: conserveh2o@wilmingtonnc.gov.

New Authority takes over water/sewer services

The City of Wilmington and New Hanover County are merging their Water and Sewer utilities to more effectively and efficiently provide services to the residents of New Hanover County. ***The Cape Fear Public Utility Authority will begin operations on July 1, 2008*** as an independent, local government entity to provide water and sewer service to everyone who lives both inside the city limits, and outside the city limits.

Important Phone Numbers Before July 1
Customer Service and Billing (910) 341-7806
Emergencies (910) 341-7884
Water Conservation Hotline (910) 341-0114

Important Phone Numbers After July 1
Customer Service & Billing (910) 332-6550
Emergency Service (910) 332-6565
Water Conservation Hotline (910) 332-6566

Your Bill: Your bill will also include city trash and stormwater charges on their water and sewer bills to minimize administrative costs. Customers will receive their initial bimonthly bills from the Authority in July or August. Payments may be made in person at either 305 Chestnut Street or at 235 Government Drive, across the street from the New Hanover County Building, or checks (made payable to CPFUA) can be mailed to the address printed on the bill.

Notice: City bills for May/June will be lower than normal because base charges for Water, Sewer, Trash and Stormwater will not be included. Fees for these services will be billed in July from the Cape Fear Public Utility Authority. Fees for trash pickup are proposed to increase slightly in the September billing.

For more information on the consolidation, customers can visit www.nhccow.org or call (910) 799-6064. After July 1, information will be available on the Authority's website at www.cfpua.org. Residents will also receive information in the mail regarding the transition.

Water Conservation

City lifts water restrictions

Thanks to the success of the mandatory water restrictions which began in October 2007 and the improving drought conditions statewide, the city has lifted mandatory water restrictions for all City of Wilmington water customers.

Although overall drought conditions have improved, we're heading into the time of year where demand for water increases so it's still important to conserve water. Remember, by conserving water you save money too.

An easy way to get started with water conservation in your home is to check indoor as well as outdoor faucets for leaks. A faucet with even a slow drip can waste a lot of water. Don't forget to check your toilet for leaks. A toilet can leak without any symptoms. This "silent leak" is the most common cause of high water bills.

There is a simple dye test you can do to make sure your toilet is not leaking. Start with clear water in both the tank and the bowl. Add several drops of food coloring to the tank. Wait 30 minutes. If any of the dyed water is now in the toilet bowl – your toilet is leaking.

Conservation Tips:
wateruseitwisely.com

Questions? More Information?

Visit:
wilmingtonnc.gov

Call:
910.341.0114

Email:
conserveh2o@wilmingtonnc.gov

There are a number of ways to save water, and they all start with YOU.

As our population grows, our demand for water grows with it. Unfortunately, our sources for water remain the same. To meet increasing demand, it's important that we all make a year-round habit of using water wisely.

The City of Wilmington is proud to be one of eight partners promoting **Water-Use it Wisely** in North Carolina. **Water-Use it Wisely** is the nation's most comprehensive water conservation community awareness campaign. **Water-Use it Wisely** communicates how a few simple changes to your water use habits can have a significant impact on overall water consumption.

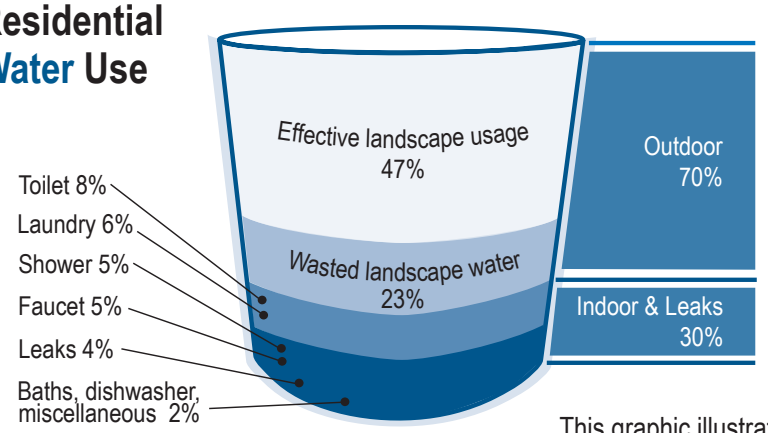
Water conservation starts with you. Simple lifestyle changes can save 5 to 10 gallons of water a day and hundreds of gallons every month. Multiply that by every household and business in our area and it adds up to millions of gallons saved. Look for water-saving tips throughout this publication, or call the Water Conservation Hotline at 341-0114 to request more information. There are a number of ways to save water, and they all start with you.

Water-Use it Wisely.

For more water saving tips visit:
www.wateruseitwisely.com

WATER USE IT WISELY®

Residential Water Use



This graphic illustrates the distribution of average residential water use.

Water Conservation

Your toilet might be costing you more money than you realize.

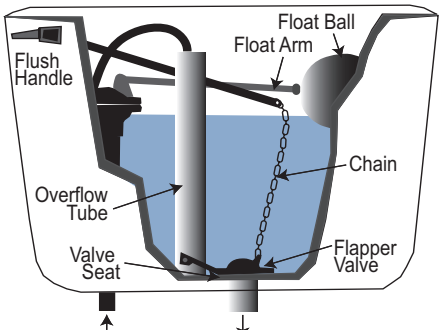
Have you ever thought about how many gallons of water you use during the course of a day? The average Wilmingtonian uses 138 gallons of water per day and generates approximately 80 gallons of wastewater per day.

Did you know that nearly 50% of water used inside a home originates from the bathroom and your toilet uses 30% of that? Think about it…whenever the toilet is flushed, you are charged for both water and sewer fees. And, if your toilet was made in 1992 or earlier, chances are you have an inefficient model that uses between 3.5 to 7 gallons per flush. Federal plumbing standards now specify that new toilets sold use no more than 1.6 gallons per flush. Newer models use 60-80 percent less water than older models. Over 10 years, one high-efficiency toilet can save a family of four roughly $1,000.

We'll Help You Save!!!

If your toilet was installed prior to 1992, you may be eligible to receive a FREE Float Booster™ water saving device. FloatBooster™ is easily installed and can reduce 3.0+ capacity toilets to approximately 1.8 gallons per flush. To find out if you're eligible for this offer, send your request via e-mail to: conserveh2o@wilmingtonnc.gov. Please put FLOAT BOOSTER REQUEST in the subject line. Requests can also be made by calling the Water Conservation hotline at 341-0114. You will be asked to complete a short questionnaire to determine eligibility.

Leaky Toilets



Leaking toilets are notorious for being responsible for high water usage and the resulting high water bills. It is important to check for and repair leaks immediately. A leaky toilet can waste up to 1,000 gallons of water each month. A frequent problem that causes a toilet to leak is a worn flapper valve or a flapper valve that doesn't sit properly on the valve seat. Flappers are relatively inexpensive and easy to replace. If you put bleach or cleaning tablets in your toilet tank, you may have to replace the flapper valve more often as the bleach can cause it to deteriorate and wear out faster.

Dye Tests

Dye tests should be performed on every toilet twice a year to identify leaks. Toilet leak detection dye tablets are available FREE at the following locations:

- City Billing, 305 Chestnut St. • City Hall, 102 N. Third St.
- Halyburton Park, S. 17th St. • County Libraries
- County Billing and Tax Office, 230 Government Center Drive
- Cape Fear Public Utilities Authority, 235 Government Center Drive

Conserve Water Outdoors

- Use a broom (or blower) instead of a hose to clean your driveway or sidewalk.
- Don't water on windy days or within two days of rain. Adjust watering times (number of minutes) and the frequency based on weather conditions.
- Install an inexpensive rain shutoff device so the sprinkler isn't running while it's raining.
- Water your lawn and garden early in the morning or evening, when temperatures are cooler, to minimize evaporation.
- Check and maintain your sprinkler heads to avoid watering the driveway, house or sidewalk.
- Water areas in shade about 30% less than sunny areas.
- Use a nozzle on your hose.
- Check outdoor faucets, sprinklers and hoses for leaks.
- Choose water-efficient drip irrigation. Watering at the roots is highly effective, so be careful not to over water.
- Consider using a rain barrel to catch rainwater, which can be used to water plants.

Water FAQs

Isn't the drought over? Why are we still encouraged to save water?

A common public perception is that water conservation means restricting or curtailing customer use as a temporary response to drought. While this can be a useful short-term drought tool, long-term improvements in water use efficiency help maintain a sufficient supply and quality of life standards. Wilmington and the surrounding area will continue its population growth and with that growth comes more service connections and more demand on both the water supply and wastewater systems. The source of the water supply, however, remains the same. Conservation helps regulate the amount of water being produced and distributed, as well as reduce the amount of water used for non-essential purposes.

Why isn't water from the Atlantic Ocean treated and used for drinking water?

Ocean water can be treated, but the process is expensive. The cost of converting salt water to drinking water has been estimated at $5 to $7 for each 1,000 gallons instead of the $0.30 to $0.50 for each 1,000 gallons of freshwater.

Ocean water contains so much salt that at least 99.2 percent of the salt would have to be removed to avoid a salty taste in drinking water. The Sweeney Water Treatment Plant is not currently equipped to process salt water.

Why do we need to conserve water?

Water conservation, very simply, is doing more with less, not doing without. It is also a key component of overall water resources planning. There are many reasons for water utilities to pursue and establish conservation programs. The specific reasons are different for each utility and the appropriate level of conservation is usually tailored to address local needs. Some of the determining factors for promoting the City's water conservation program are:

- ***Wastewater treatment and disposal benefits:***
  Reduction of interior water use cuts wastewater flows, resulting in cost savings and lessened environmental impacts.

- ***Regulatory compliance:***
  Some state regulatory agencies require water conservation plans to qualify for permits, grants and loans.

- ***Water supply demand and reliability:***
  Lowering water production and/or distribution costs will save the City and its citizens money in reduced operational costs. Water conservation can stretch existing supplies while maintaining quality of life standards.

- ***Improved supply reliability:***
  Conservation can reduce the frequency and duration of drought water use restrictions.

- ***Customer benefits:***
  Customers who conserve water may enjoy lower water bills and possibly lower sewer and energy bills.

What can I do if I see water waste?

Preventing water waste is the responsibility of everyone. If you see water collecting and ponding caused by irrigation systems and breaks or leaks or if you notice an irrigation system operating during a rain event, call or email us:

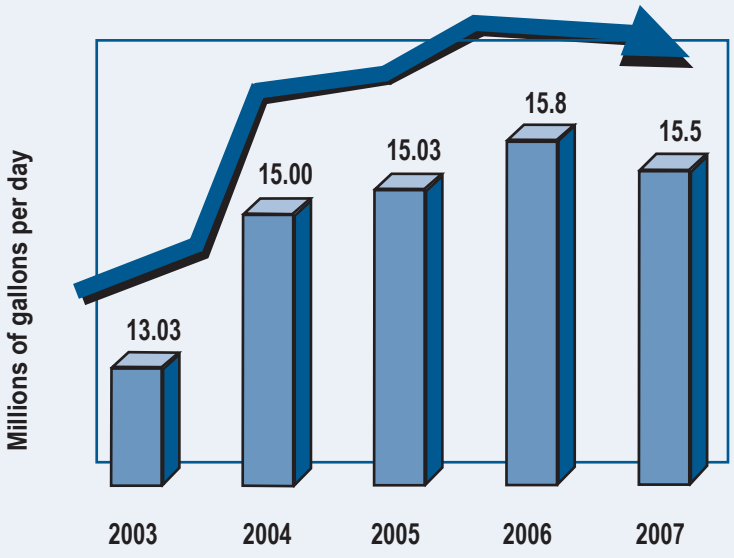
Water Conservation Hotline at 341-0114
conserveh2o@wilmingtonnc.gov.

Conservation works!

This chart reflects the city's yearly average of water distributed over the last five years *(in millions of gallons per day)*. The amount of water distributed to the City has been steadily increasing due to population growth.

A combination of your water conservation efforts, the drought and the water restrictions resulted in a decrease in the city's water use in 2007.

For more ways to save water or information concerning the drought, please visit the City's website at wilmingtonnc.gov. For water saving tips, please visit wateruseitwisely.com.



2007 City of Wilmington Drinking Water Quality Report

About this report

Each year, the City of Wilmington Public Utilities Department prepares a Drinking Water Quality Report for its customers, as mandated by federal law. This report provides important details about the quality of the drinking water we provide to our community.

No Violations

During 2007, or during any compliance period ending in 2007 there were **NO** violations of drinking water standards.

Questions

If you have any questions about this report or quality of your drinking water, please call the Sweeney Water Treatment Plant at 910-343-3690 or log on to our website at www.wilmingtonnc.gov.

En Espanol

Este informe contiene informacion muy importante. Traduzcalo o hable con un amigo quien lo entienda bien.

343-3690

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is a snapshot of last year's drinking water quality. Included are details about where your drinking water comes from, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. The City of Wilmington is committed to ensuring you receive clean drinking water and to provide you with this information, because informed customers are our best allies.

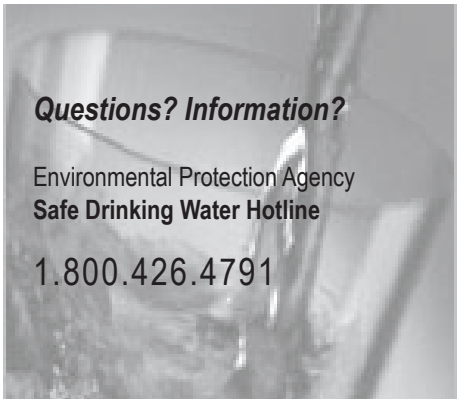
What EPA wants you to know...

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some natural substances. The presence of these substances does not necessarily indicate that water poses a health risk.

Some people may be more vulnerable to substances in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological substances are available from the Safe Drinking Water Hotline.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Substances that may be present in source water include **microbial substances**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; **inorganic substances**, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; **pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; **organic chemical substances**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and **radioactive substances**, which can be naturally-occurring or be the result of oil production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain substances in water provided by public water systems. FDA regulations establish limits for substances in bottled water that must provide the same protection for public health.



Water quality data tables of detected substances

City of Wilmington PWS #04-65-010

We routinely monitor for over 150 substances in your drinking water according to Federal and State laws. The tables below list all the drinking water substances that we **detected** in the last round of sampling for the particular substance group. The presence of these substances does **not** necessarily indicate that water poses a health risk. **Unless otherwise noted, the data presented in these tables is from testing done January 1 through December 31, 2007.** The EPA or the State requires us to monitor for certain substances less than once per year because the concentrations of these substances are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old. Unregulated substances are those for which EPA has not established drinking water standards. The purpose of unregulated substance monitoring is to assist EPA in determining the occurrence of unregulated substances in drinking water and whether future regulation is warranted.

MICROBIOLOGICAL Substances

Substance (units)	MCL Violation	Your Water	MCLG	MCL	Likely Source
Total Coliform Bacteria *(presence or absence)*	NO	0.8%	0	5% of monthly samples are positive	Naturally present in the environment
Fecal Coliform or E. coli *(presence or absence)*	NO	0	0	0*	Human and animal fecal waste

**Note: The MCL is exceeded if a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or E. coli positive.*

TURBIDITY* Systems with population ≥10,000

Substance (units)	MCL Violation	Your Water	MCLG	MCL	Likely Source
Turbidity (NTU)	NO	0.21	NA	TT = 1 NTU Max	Soil Runoff
		100%		TT= percentage of samples ≤ 0.3 NTU	

**Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU.*

INORGANIC Substances

Substance (units)	Sample Date	MCL Violation	Your Water	Range low/high	MCLG	MCL	Likely Source
Flouride (ppm) Sweeney WTP Surface water source	11/19/07	NO	1.10	NA	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizers and aluminum factories
Flouride (ppm) Hillside Well Groundwater source	2/28/06	NO	0.10	NA	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizers and aluminum factories
Flouride (ppm) Lord Creek Groundwater source	9/12/05	NO	0.16	NA	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizers and aluminum factories

UNREGULATED INORGANIC Substances

Substances (units)	Sample Date	Your Water	Secondary MCL
Sulfate (ppm)	11/19/07	37.0	250

UNREGULATED VOC Substances

Substances (units)	Sample Date	Your Water
Bromoform (ppb)	07/11/07	3.1
Chloroform (ppb)	07/11/07	5.6
Bromodichloromethane (ppb)	07/11/07	12.0
Chlorodibromomethane (ppb)	07/11/07	14.0
Chloromethane (ppb)	07/11/07	3.7

LEAD and COPPER

Substance (units)	Sample Date	Your Water	# of Sites Found Above the AL	MCLG	MCL	Likely Source
Copper (ppm) *90th percentile*	Summer 2005	0.325	0 of 57 samples	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) *90th percentile*	Summer 2005	<3.0	1 of 57 samples	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800) 426-4791.

RADIOACTIVE Substances

Substance (units)	Sample Date	MCL Violation	Your Water	MCLG	MCL	Likely Source
Combined Radium (pCi/L)						
SWTP-Surface water source	Quarterly 2005	NO	1.06	0	5	Erosion of natural deposits
Hillside Well-Groundwater	Quarterly 2005	NO	0.53	0	5	Erosion of natural deposits
Lords Creek-Groundwater	Quarterly 2005	NO	0.56	0	5	Erosion of natural deposits

DISINFECTION BYPRODUCT PRECURSORS

Our water system used [Step 1] as the method to comply with the disinfectants/disinfectant byproducts treatment technique requirements.

Substance (units)	Sample Date	MCL/TT Violation	Your Water	Range low/high	MCLG	MCL	Likely Source
Total Organic Carbon (ppm) (TOC)-RAW	Weekly Tuesday	NO	6.2	4.6/10.2	NA	TT	Naturally present in the environment
Total Organic Carbon (ppm) (TOC)-Treated	Weekly Tuesday	NO	2.2	1.8/3.0	NA	TT	

Depending on the TOC in our source water, the system MUST have a certain % removal of TOC or must achieve alternative compliance criteria. If we do not achieve that % removal, there is an alternative % removal. If we fail to meet the alternative % removal, we are in violation of a Treatment Technique (TT). Minimum % removal achieved was 59%.

STEP 1 TOC Removal Requirements (%)

Source Water TOC (mg/L)	Source Water Alkalinity mg/L as CaCO3 (in percentages)		
	0 - 60	**> 60 - 120**	**> 120**
> 2.0 - 4.0	35.0	25.0	15.0
> 4.0 - 8.0	45.0	35.0	25.0
> 8.0	50.0	40.0	30.0

DISINFECTANTS and DISINFECTION BYPRODUCTS

Substance (units)	MCL/MRDL Violation	Your Water (AVG)	Range low/high	MCLG	MCL	Likely Source
TTHM (ppb) Total Trihalomethanes**	NO	39.8	4.8/86.1	NA	80	Byproduct of drinking water chlorination
HAA5 (ppb) Total Haloacetic Acid	NO	16.7	2.0/37.2	NA	60	Byproduct of drinking water disinfection
Chlorine (ppm)	NO	1.2	<0.1/1.9	MRDLG=4	MRDL=4	Water additive used to control microbes

**Compliance based on Running Annual Average of all distribution samples.*

WATER CHARACTERISTICS

Secondary Substances, required by the NC Public Water Supply Section, are substances that affect the taste, odor, and/or color of drinking water. These aesthetic substances normally do not have any health effects and normally do not affect the safety of your water.

Substance (units)	Sample Date	Your Water	Range	Secondary MCL
pH (s.u.)				
Sweeney WTP-surface water	11/19/07	7.35	NA	6.5 to 8.5
Hillside Well-groundwater	2/28/06	8.01	NA	6.5 to 8.5
Lords Creek-groundwater	9/12/05	7.41	NA	6.5 to 8.5
Sodium (ppm)				
Sweeney WTP-surface water	11/19/07	29.00	NA	NA
Hillside Well-groundwater	2/28/06	7.80	NA	NA
Lords Creek-groundwater	9/12/05	20.00	NA	NA

CRYPTOSPORIDIUM

Our system monitored for Cryptosporidium and found no detected levels of 12 monthly samples in the source water and found no detects in a 12 month period of the finished water leaving the water treatment facility. **Cryptosporidium, *or Crypto***, is a microbial parasite which is found in surface water throughout the U.S. Although Crypto can be removed by filtration, the most commonly used filtration methods cannot guarantee 100 percent removal. Our facility utilizes a multi-barrier approach for removal; ***Ozone*** is used as a pre-oxidant and disinfectant in both pre and intermediate treatment of our water prior to filtration. Monitoring of our source water indicates the presence of these organisms; however, current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infections include nausea, diarrhea, and abdominal cramps. Most healthy individuals are able to overcome the disease within a few weeks; however, immuno-compromised people have more difficulty and are at greater risk of developing severe, life-threatening illness. Immuno-compromised individuals are encouraged to consult their doctor regarding appropriate precautions to take to prevent infection. Cryptosporidium must be ingested for it to cause disease, and it may be spread through means other than drinking water.

DEFINITIONS

(AL) Action Level. The concentration of a substance which, if exceeded, triggers treatment or other requirements, which a water system must follow. **(AVG) Average.** Approximate or summary concentration, determined by dividing the total of all results by the number of analysis.**(MCL)* Maximum Contaminant Level.** The highest level of a contaminant that is allowed in drinking water based on potential health effects.**(MCLG) Maximum Contaminant Level Goal.** The level of a contaminant in drinking water below which there is no known or expected risk to health. **(MRDL) Maximum Residual Disinfection Level**. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.**(MRDLG) Maximum Residual Disinfection Level Goal.** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants. **(MFL) Micron Fibers per Liter.** The unit used to measure asbestos concentration. **(N/A) Not-Applicable.** Information not applicable/not required for that particular water system or for that particular rule.**(ND) Non-Detects** Laboratory analysis indicates that the substance is not present at the level of detection set for the particular methodology used.**(NTU) Nephelometric Turbidity Unit.** A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. **pCi/L (Picocuries per liter).** Measures radioactivity in water. **(ppm) Parts per million.** One part per million corresponds to one minute in two years, or a single penny in $10,000. **Parts per billion.** One part per billion corresponds to one minute in 2,000 years, or one penny in $10 million. **Range.** Lowest to the highest levels detected. **(TT) Treatment Technique.** A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.**Turbidity MCL.** Less than 0.3 NTU's in 95% of all samples collected. **Note***: MCL are set at very stringent levels. To understand the possible health effects for many regulated substances, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

When you turn on your tap, consider the source

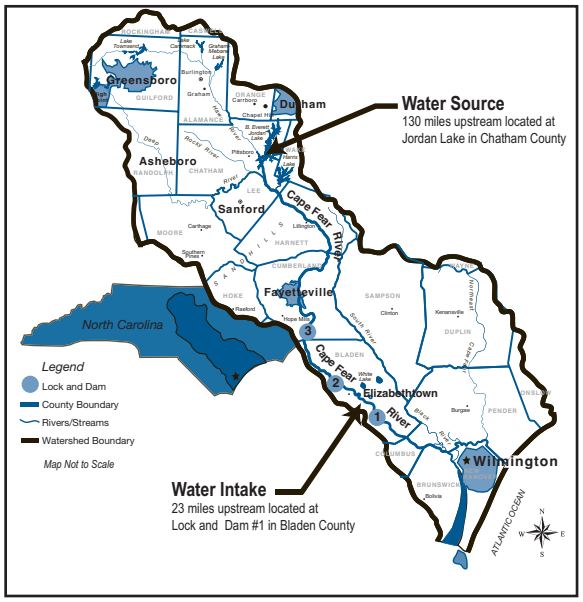
The water that is used by this system is surface water from the Cape Fear River located in Bladen County and from groundwater wells at Lords Creek and Hillside.

The origin of our water

The City of Wilmington's Water Treatment Division is responsible for the water supply, water treatment, and distribution system. With a staff of certified water treatment operators, the City operates the 27.5-million gallon per day Sweeney Water Treatment Plant that withdraws water from the Cape Fear River. Ozonation is the primary disinfection method used in treating the raw water.

Raw water supply

Our raw water supply comes from Jordan Lake and travels down the Cape Fear River to the intake at Lock and Dam #1. Rainfall flows into tributaries which also feed into the Cape Fear River. Before it reaches the intake, the water must cascade over Lock & Dam #3 and Lock & Dam #2. If there is not enough flow leaving Jordan Lake, this will affect the city's water supply by reducing water levels at the intake site. Levels at Lock & Dam #1 could drop to a point where no water would flow over it. This would mean that our water supply would be limited to the amount of water between Lock & Dam #1 and Lock and Dam #2, which is about a 35-day supply.



Pharmaceuticals/ Personal Care Products or PPCPs

The City of Wilmington strives to provide its customers with the safest and best tasting water possible. As part of our efforts, Sweeney WTP has begun testing the raw water influent into the plant for an emerging class of chemicals known as Pharmaceuticals/ Personal Care Products or PPCPs. Pharmaceuticals and Personal Care Products as Pollutants (PPCPs) refers, in general, to any product used by individuals for personal health or cosmetic reasons or used by agribusiness to enhance growth or health of livestock. PPCPs comprise a diverse collection of thousands of chemical substances, including prescription and over-the-counter therapeutic drugs, veterinary drugs, fragrances, and cosmetics.

Table of PPCPs *(sample dates 7-24-2007)*

Compound	Results (ug/l)	Current MRL* (ug/l)	Origin
Caffeine	.037	.005	Food additive, asthma medication
Carbamazepine	.0092	.0001	Anticonvulsant medication
Cotinine	.007	.001	Compound resulting from metabolizing Nicotine in your system
DEET	.031	.001	Insect repellant
Lincomycin	.0004	.0001	Antibiotic (Lincosomide)
Nicotine	.008	.005	Alkaloid stimulant found in tobacco
Sulfamethoxazole	.010	.005	Antibiotic for treating UTI, malaria, conjuctivitis, toxoplasmosis

**Minimum recovery level*

Studies have shown that pharmaceuticals are present in our nation's waterbodies. Further research suggests that certain drugs may cause ecological harm. The EPA is committed to investigating this topic and developing strategies to help protect the health of both the environment and the public. To date, scientists have found no evidence of adverse human health effects from PPCPs in the environment.

Source water assessment program (SWAP)

The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contamination Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating of Higher, Moderate or Lower.

The relative susceptibility rating of each source for the City of Wilmington was determined by combining the contaminant rating (number and location of PCSs within the assessment area) and the inherit vulnerability rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area). The assessment findings are summarized in the table below:

Susceptibility of PCSs

SWAP Report Date April 1, 2005
PWSID #04-65-010

Source Name	Susceptibility Rating *
Cape Fear River	Moderate
Lower C.F. W&S Authority	Moderate
Hillside Well	Moderate
Lords Creek Well	Lower

*It is important to understand that a susceptibility rating of "higher" does not imply poor water quality, only the systems' potential to become contaminated by PCS's in the assessment area.

The complete SWAP Assessment report for the City of Wilmington may be viewed at: www.deh.enr.state.nc.us/pws/swap. Please note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this web site may differ from the results that were available at the time this water quality report was prepared.

To obtain a printed copy of this report, please mail a written request to: Source Water Assessment Program - Report Request, 1634 Mail Service Center, Raleigh NC 27699-1634, or email request to swap@ncmail.net. Please indicate your system name, PWSID #04-65-010, and provide your name, mailing address and phone number. If you have any questions about the SWAP report, please contact the Source Water Assessment staff at 919-715-2633.